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IN THE

Supreme Court of the United States

OCTOBER TERM, 1949

No. 455

AUTOMATIC RADIO MANUFACTURING COMPANY, INC.,

Petitioner,

against

HAZELTINE RESEARCH, INC.,

Respondent.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FIRST CIRCUIT

MOTION ON BEHALF OF EDWIN H. ARMSTRONG FOR LEAVE TO FILE A BRIEF AS *AMICUS CURIAE* AND BRIEF

ALFRED MCCORMACK,
Attorney for Edwin H. Armstrong as Amicus Curiae.

WALTON H. HAMILTON,
Of Counsel.

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MOTION ON BEHALF OF EDWIN H. ARMSTRONG FOR LEAVE TO FILE A BRIEF AS *AMICUS CURIAE*

To the Honorable, The Chief Justice of the United States and the Associate Justices of the Supreme Court of the United States:

Now comes Alfred McCormack, attorney for Edwin H. Armstrong, and respectfully moves this Court, pursuant to Rule 27, paragraph 9, of the Rules of this Court, for leave to file the accompanying brief in this case *amicus curiae*. The consent of the attorney for the respondent herein to the filing of this brief has been obtained and filed with the Clerk of the Court. The consent of the attorney for the petitioner was requested but was refused. The interest of

Edwin H. Armstrong and his reasons for asking for leave to file a brief *amicus curiae* are set forth below.

The Solicitor General, as *amicus curiae*, has filed in this case a brief in support of the petition for certiorari, in which he has asked this Court to overrule *General Talking Pictures Co.* v. *Western Electric Co.*, 304 U. S. 175, 305 U. S. 124, and to adopt a number of rules of thumb in connection with patent licenses.

Dr. Edwin H. Armstrong, Professor of Electrical Engineering at Columbia University, is an inventor and patentee in the field of radio. In 1940, upon the 150th anniversary of the patent system, he was one of the 19 living Americans who were singled out as having made great contributions of an inventive character to American life. Among the many awards that have been made to him for his achievements is the Medal of Merit, for his work for the Armed Forces during the recent war. He is not, and never has been, engaged in manufacturing or selling goods and has never been employed by any business corporation. He is perhaps the outstanding example in this country of the "independent" inventor.

Dr. Armstrong desires that the accompanying brief be filed on his behalf in order that the Court may have before it the point of view of the inventor and independent patentee on the issues framed by the Solicitor General, because the decision of this case might have far-reaching implications for them. As one who has granted many patent licenses and derives from them the revenues that enable him to maintain a research laboratory and experimental radio stations, Dr. Armstrong has a vital interest in those issues. As one who has had almost 40 years of experience with

inventions and with the patent system, Dr. Armstrong is in a position to understand the problems and express the viewpoint of the individual inventor. He is concerned with the protection of inventors and the furtherance of invention in aid of the constitutional and statutory purpose of the patent laws—to promote science and the useful arts.

The considerations of public policy that attach to that purpose are important at any time. They are especially important at the present time, Dr. Armstrong believes, because the future of the nation and even its survival may depend upon its continuing progress in science and the useful arts.

Respectfully submitted,

ALFRED MCCORMACK,
Attorney for Edwin H. Armstrong.

WALTON H. HAMILTON,
Of Counsel.

March 14, 1950.

IN THE

Supreme Court of the United States

OCTOBER TERM, 1949

No. 455

AUTOMATIC RADIO MANUFACTURING COMPANY, INC.,
Petitioner,
against
HAZELTINE RESEARCH, INC.,
Respondent.

BRIEF FOR EDWIN H. ARMSTRONG AS *AMICUS CURIAE*

Edwin H. Armstrong, on whose behalf this brief is submitted, is an electrical engineer whose life has been devoted to research and invention in the field of radio communication. A member of the faculty of Columbia University as a Professor of Electrical Engineering, he has received world-wide recognition for having made a number of fundamental contributions of an inventive character in the radio field. He has never been engaged in any manufacturing business and has never been employed by any corporation or other business organization. He has never attempted by means of his inventions to obtain control over any field of manufacture, sale or use of devices covered by his patents, but has derived revenues from his numerous

inventions by selling his patents or granting licenses under them.

Professor Armstrong is chiefly known to the public at present as the inventor of "FM", the system of radio communication which solved the "insoluble" problem of static and noise disturbances in radio and opened up a great many new uses for radio communication.

Finding that the large companies in the radio industry were in no hurry to put his FM inventions into public use, Dr. Armstrong pioneered the field himself. He demonstrated the effectiveness of his system by building a high-powered broadcasting station and providing receivers at his own expense with which it could be tested. Then, having publicly proved the capabilities of his system, he began to grant licenses to companies that were willing to go forward in the FM field. All his licenses are non-exclusive; and any applicant can obtain a license in any field, or in any number of fields, in which he desires to operate.

Professor Armstrong is not concerned with the outcome of this case, insofar as the fortunes of the respective parties may be affected. But he is deeply concerned with the rights of inventors and patentees, which he believes will be affected seriously and adversely if, in deciding the case, the Court should accept the viewpoint expressed in the Memorandum of the Solicitor General in support of the petition for certiorari or adopt any of the rules of thumb of "*per se* misuse" which he urges.

In its decisions over the last few years, this Court has shown an overwhelming concern with the danger that manufacturers and other holders of large portfolios of patents may employ them to restrain trade or obtain monopolies be-

yond the proper scope of those patents. The Court's concern with that danger has resulted in a continually evolving doctrine of "misuse", which, however salutary its results in the few cases which have reached this Court, has tended to become a "rule of thumb" in the lower courts, and for the patent bar, to be applied equally where the mischief which this Court has struck at exists and where it does not exist.

In its decisions over the last few years, this Court has frequently emphasized the principle that the dominant interest in the patent system is the public interest. But the cases in which the Court has reiterated that principle have been, for the most part, cases in which the public interest was served only negatively—by the invalidation of patents or prevention of their enforcement. Only infrequently has this Court had the opportunity to consider, and give effect to, the affirmative aspect of the public interest which is the objective of the patent law, namely, the promotion of science and the useful arts.

Many thoughtful citizens, mindful of the considerations of public interest that are involved in the progress of science and the useful arts, have become deeply concerned in recent years about the effectiveness of the patent system in encouraging invention. Dr. Vannevar Bush, for instance, in his recent book "Modern Arms and Free Men", has considered it necessary to plead for the inventor. He has urged (p. 230):

> "Above all we need to return to the conviction that he who makes two blades of grass grow where one grew before, who creates a new product or service that the public desires, who is creating worthwhile things that are genuinely new, and following the laws

of the land and of decency as he does so, is a public benefactor. We need also the conviction that the best way to encourage him is to unwind the red tape from about his neck and allow him to keep a reasonable fraction of his gains."

Dr. Armstrong has been engaged in the making of inventions for nearly 40 years. He has studied the lives and work of great inventors and has closely observed the roles of inventors and inventions in peace and war. He is convinced that invention has played a determinative role in the industrial progress and the social progress of the people of the United States and that the encouragement of invention for the future is today a matter of the greatest public interest, most especially from the standpoint of national defense and security. He is well qualified to speak on that subject, since all his time during two world wars, as well as much of his time before and since the recent war, has been devoted to inventive activities in aid of the national defense.

Professor Armstrong makes the point that, in order to have inventions, there must be inventors; and if the making of inventions is to be encouraged, there must be a patent system that reasonably protects inventors' rights. He believes that the lot of inventors has been made more difficult by the trends of judicial decisions in the patent law over the last 20 years, that the sometimes adverse attitude of the Federal courts toward patents, the development of unrealistic and over-technical rules about disclosures and claims, the creation of exceptions to patentability not contemplated by the Constitution or the patent law as framed and re-enacted by Congress from time to time, the restrictions which inventors have been

forced to accept for fear of being held guilty of "misuse", and the impairment and partial (if not almost complete) destruction of the time-honored and frequently essential protection of contributory infringement—have tended to weaken the position of the individual inventor and the small-business patent holder as compared with their larger competitors, thus bringing about a result quite opposite to that which the courts have sought to produce.

A more liberal attitude toward inventions and inventors is called for if the constitutional purpose of the patent law, to promote the progress of science and the useful arts, is to be given effect. It is Dr. Armstrong's conviction that the constitutional purpose has been lost sight of in some of the decisions of the courts over the past 20 years. He adds his plea for a return to first principles of the patent law to that of Dr. Vannévar Bush, quoted above. He urges particularly that the inventor and patentee be allowed a fair degree of freedom to license his patents upon terms suited to the business situations *in which he finds* himself.

We shall attempt to show in this brief, by reference to specific situations that have confronted patentees, how seriously their freedom would be restricted and their rights impaired if this Court were to adopt the niggardly attitude toward patent rights which the Solicitor General takes or to accept any of the rules of thumb which he advocates.

POINT I

THE COURT SHOULD REJECT THE CONTENTION OF THE SOLICITOR GENERAL THAT A LICENSE TO MANUFACTURE FOR PARTICULAR USES, EITHER ALONE OR WHEN COUPLED WITH A NOTICE OF THE TYPE REQUIRED BY THE RESPONDENT, IS UNLAWFUL.

In his Memorandum in support of the petition for certiorari, the Solicitor General has condemned both licenses to manufacture for limited fields of use and the requirement found in many of such licenses that the licensee must affix a notice relating to the scope of his license. His attack is twofold:

(1) There is, first, a broad attack on all "limited use" licenses under patents. The thesis seems to be that, if a patent owner gives a manufacturer a license to invade one field of use of the patented product, he must go on and license all fields; that nothing less than a complete grant suffices, because "the necessary effect would seem to be that competitors obtaining licenses in different fields would thereby obtain immunity from competition in the particular field covered by their license." (p. 10).

We do not stop to elaborate the point that every new field of use opened up by a patent license increases competition, and *pro tanto* waives the patent monopoly. What we particularly point out is that the Solicitor General's argument is made without reference to the facts of the case. The record shows that the respondent is in the business of granting patent licenses to anybody and everybody who wants to use or obtain the right to use its patents in the fields where they do business, or may want to do business; so that the

element of protecting licensees from competition by division of fields is obviously not present in the case.

The Solicitor General is confusing "restricted use" with "exclusive grant". He is not talking about the present case, but about one where the licensor is in control of an industry and has the power to subdivide patent rights into fields that are not only limited but exclusive. *Cf. Hartford Empire* v. *United States*, 323 U. S. 386.

(2) The second attack, a more narrow one, is directed at this Court's two decisions in *General Talking Pictures Co.* v. *Western Electric Co.*, 304 U. S. 175; 305 U. S. 124. It is said that the limited license, plus the requirement of affixing a notice of the limited license, restrains trade because "if the licensee violates the contract and sells to a purchaser for a restricted use, the purchaser may be subject to a suit for infringement under the *General Talking Pictures* case" and, under that case, "apparently any purchaser, no matter how remote, would be liable for infringement as long as he had notice of the restriction and every purchaser would have notice by virtue of the required 'License Notice' forbidding commercial use stamped on the article. The restriction and notice together thus clearly extend the patentee's control to a purchaser in the ordinary channels of trade" (p. 8).

Such an interpretation of the *General Talking Pictures* case is not justified either by the holding of the case or by anything said in the opinions. In the *General Talking Pictures* case, which was a real controversy over the effect of a limited license, this Court decided only that a commercial company, intending to use patented apparatus for a commercial use, was guilty of participating in an infringe-

ment when—instead of getting the apparatus from a company licensed to furnish it for commercial use—it chose to do business with a manufacturer who, to its knowledge, had taken a license to manufacture and sell for only non-commercial uses. That is all the Court decided. It did not decide that "any purchaser, no matter how remote, would be liable for infringement", nor did it decide that "the patentee's control" extended "to a purchaser in the ordinary channels of trade".

On the contrary, Mr. Justice Black in his dissent having invoked the rule of property that the owner of a chattel purchased in the ordinary channels of trade may do with it what he pleases, the majority of the Court found that rule inapplicable on the ground that the apparatus involved in the *General Talking Pictures* case had never got into the channels of trade; that an act of infringement had occurred when the defendant made the purchase.

We can conceive of a variety of situations in which the rule of patent law upon which the *General Talking Pictures* case was decided might come into conflict with the rule of property invoked by Mr. Justice Black. To the extent that such conflicts come before the courts, a line must be drawn which gives proper effect to the opposing considerations of public policy. But the Solicitor General wants this Court to give up trying to resolve such conflicts intelligently from case to case, in the light of the facts, by treating "as a misuse of the patents *ab initio*" the combining of a limited use license with a notice designed to give it effect, on the ground that "the restrictions imposed upon ordinary purchasers will be effective in practice if the purchaser is faced with expensive litigation if he disregards the restriction" (p. 9).

That argument is merely an assertion, not based on anything in the record. There is nothing to show that any purchaser of petitioner's radio sets ever wanted them for any use other than "use in homes, for educational purposes and for private, non-commercial use". There is nothing to show, in fact, that they were capable of such other use.* Moreover, if they were capable of such a use, there is nothing to show that purchasers have not put them to that use, especially since, according to the petitioner's answer (par. 9), it made a practice of *not* affixing the license notice to its sets.

Thus the Solicitor General is asking this Court to speculate on the possible effects of a limited license notice—and a non-existent one at that—and, on the basis of such speculation, to decide a question upon which on the facts there is no controversy between the parties.

Professor Armstrong does not require limited use license notices in any of his license agreements. He can, however, conceive of a situation in which such a notice would be necessary in order to make a limited use license effective and promote the wide use of a patented invention in different fields. That point may be illustrated by some of the practical examples of limited licenses that we will presently mention.

Limited use licenses, such as that employed by the respondent, ought not to be condemned merely because they are antiquated and inaptly worded, so that their purpose appears to be much broader than it actually is—and broader than any legal effect that they could have—because in the practical world the inaptly broad wording does no harm.

*We believe that this Court might well take judicial notice of the fact that home receiving sets are built to receive the radio frequencies assigned to broadcasting and are *totally useless* on the wave lengths assigned to the commercial services.

We doubt if any informed person today believes, or has believed at any time in recent years, that a patentee can limit the use of a device by one who has purchased it merely by putting a limited use license notice on it. And certainly nobody thinks that such a notice prevents a member of the public who buys a home receiving set from using it for whatever purpose pleases him. Actually, it is not adapted to any purpose except to receive broadcast programs. No matter how good a set it may be, it would have to be redesigned and rebuilt, so as to respond to widely different radio frequencies, before it could be used in commercial communication.

But the notice is not merely silly, since it has two practical purposes, neither of which has any implication adverse to the public interest, (a) to deter manufacturers, who have sought and obtained a license to manufacture apparatus suitable for non-commercial purposes, from making and selling entirely different apparatus without obtaining an appropriate license, under the pretense that the apparatus is intended for non-commercial use, and (b) to deter the commercial user from inducing a broadcast receiver manufacturer to make commercial apparatus for him without obtaining an appropriate license.

We venture to submit to the Court a number of illustrations of business situations in which limited licenses are essential to the protection of patentees and the promotion of the widest use of inventions.

In the fall of 1914, shortly before issuance of Professor Armstrong's patent on the regenerative circuit, the sole existing embodiment of his invention was a radio receiving apparatus in the laboratory at Columbia University where he worked. World War I had broken out, cable connections with Germany had been cut, and there was only one

means of rapid communication from Germany to the United States—radio telegraph messages from the Telefunken Company's transmitting station at Nauen to the Sayville, Long Island, receiving station of Telefunken's American affiliate, the Atlantic Communications Company. The Sayville station, however, had been unable to develop receiving equipment that would detect the Nauen signals under any but the most favorable radio conditions; and the Nauen-Sayville link proved to be a failure.

In the laboratory at Columbia University, however, there was the one piece of apparatus in the United States by which the Nauen signals could be received without difficulty. Consequently, Professor Armstrong's hand-built receiving set was moved to Sayville; and there, until a duplicate could be built, it served as the sole means of fast communication from Germany to the United States at a critical time. For the rental of his set and the right to make and use additional sets at the Sayville station, the Atlantic Communications Company paid Armstrong a monthly sum beginning at $100 and finally increasing to $250—the first royalties he ever collected under a patent. At such a price the Atlantic Communications Company bought itself out of total failure and certain bankruptcy.

Now it happened that, in addition to the commercial wireless telegraph companies, there was at the time another market for radio receiving sets employing the regenerative circuit—the wireless amateurs or "hams", who communicated among themselves and listened to the commercial stations, for their own amusement and education. Several companies were manufacturing amateur apparatus, and those, or some of them, Professor Armstrong licensed under his regenerative patent. As the "hams" were not engaged in the radio business and were not deriving profits from the

use of the invention, only a small royalty on sets sold to them could be justified.

Let us suppose that the licenses to the manufacturers, "for amateur use only", had antedated the arrangement with the Atlantic Communications Company and that that company, instead of obtaining a license from Armstrong, had gone to one of the manufacturers of amateur sets and induced it to go beyond its license by selling a set for commercial purposes, and, with the apparatus so purchased, had saved itself from its desperate plight. Would anyone think it right and proper that the patentee, holding a patent on one of the great inventions of modern times, should have been without a remedy, or that his remedy should lie only against the little manufacturer and not against the big customer who had induced the infringement?

If it were the law that the patentee in such a situation would be without an adequate remedy, his course would be clearly indicated. He would either confine himself to licensing the commercial companies or would insist on royalties at the commercial rates on non-commercial uses. Such a rule would be a great deterrent to the licensing of patents.

During the recent war, Professor Armstrong granted royalty-free licenses under his patents for FM communication apparatus for the Army, the Navy and other agencies engaged in war activities, and about a quarter of a billion dollars worth of such apparatus was sold to the Government without any royalty charge. Much of the equipment was capable of use for non-military purposes, such as police communication, railroad switching-yard operations, bus line signaling, inter-car communication on freight trains, taxicab dispatching and a variety of other uses.

Let us suppose that a wholesale supplier engaged in furnishing apparatus to the Government had purchased military apparatus from a manufacturer and, instead of selling it to the Government, had been induced by some railroad, bus line or taxicab company to sell the apparatus to it for non-military purposes. Would it be right and proper that the patentee should be without a remedy against such an intentional infringer, on the ground that the restriction of his free license to military uses was invalid?

Armstrong has made a practice of issuing royalty-free licenses for FM broadcast transmitters to educational and religious organizations, so that manufacturers may build such apparatus for those institutions without being concerned about the Armstrong patents. Should it be held, as the Solicitor General's argument seems to imply, that a restriction to charitable uses is invalid? Or should a restricted use notice, limiting the royalty-free use to the purposes of the educational or charitable organization, be held void, so that anybody who could get a chartered educational institution to buy a transmitter for him could infringe the patents at will?

The Solicitor General apparently does not perceive any reason for subdividing manufacturing rights among different companies except to prevent competition among them. Actually, limited manufacturing licenses in ordinary life conform to the natural divisions of business in a highly industrialized economy. The patentee does not create such divisions; he finds them in existence and must take them into account in his licensing program.* Professor Arm-

* At least one large corporation, which is licensed under a great many patents, makes a practice of taking licenses that are limited to the precise field in which it desires to do business, with a clause that limits its admission of validity of the patents to that precise field.

strong, for example, has four principal types of licensees under his FM patents, and with each type he has a different form of license agreement and collects royalties on a different basis: (1) manufacturers of radio broadcast receivers; (2) users of radio broadcast transmitters; (3) manufacturers of two-way communication apparatus and other commercial apparatus; and (4) companies engaged in public service communication for tolls.

The existence of four types of license agreements and four methods of computing royalties is due to the different kinds of business that the four types represent.

The radio broadcast receiving set manufacturers, who are very numerous, are engaged in mass production with unskilled or semi-skilled labor, employing assembly line techniques. Very few of them make any other type of radio apparatus; and when they do, as in the case of the General Electric Company or the Westinghouse Electric Corporation, they hold more than one kind of license agreement from Armstrong.

The licenses of the broadcast receiving set manufacturers do not grant rights beyond the field of the ordinary non-commercial receiver. The formula for computing royalties is quite complicated, because it is especially adapted to the peculiarities of the business. It is a percentage of the manufacturer's selling price after a variety of deductions—each deduction having been worked out by negotiations with one or another licensee for the purpose of producing a royalty base that would best equalize the economic burden of the royalties among licensees doing business in different price classes of apparatus or employing different methods of distributing their products.

Because the volume of business is large and price competition in the industry very keen, and because the ultimate

consumer does not derive revenue from the use of the patented articles, the royalty rate is low—2½ percent of the royalty base, which amounts to less than ½ of 1 percent of what the public pays for the licensed radio sets.

The users of radio broadcast transmitters are the commercial broadcasters and others maintaining broadcasting stations. One of the most important reasons for licensing them directly is to make possible an extremely simple method of computing royalties—a sliding scale in terms of dollars, according to the operating power of the station. It is the operating power of a station that determines how wide a geographical area the broadcaster can serve, and thus is a major factor in determining the amount of advertising revenue that he can derive. If, after taking a license and erecting the station, the owner increases the operating power, he pays an additional sum as royalty; and he does the same thing on any further increase of power. Here again the royalty arrangement, which came about through negotiations with broadcasters who were going to erect stations, is the one that has been found best adapted to the particular business situation and is considered fairest by those concerned.

Manufacturers of two-way communication apparatus and other commercial apparatus are an entirely different group from the broadcast receiver manufacturers, though there are some duplications between them; and the character of their business is quite different. The apparatus must be engineered and designed to meet the special requirements of particular customers, and must perform according to their specifications. It is a "tailor-made" business, involving a high quality of engineering and skilled labor. The royalty rate is higher than on broadcast receivers, and the computation of the royalty base is entirely different. The

royalty arrangements were arrived at from time to time in negotiations with the companies engaged in the commercial field, and are suited to the requirements of the particular business.

Professor Armstrong has licensed the leading telegraphic communications company to employ his patents in radio communication for tolls, on a royalty basis entirely different from that employed in other situations—a sliding-scale charge based on the mileage of the company's commercial radio circuits and the number of channels per circuit, plus an annual charge for each terminal equipment in use. There were a number of business reasons for this unusual method of computing royalties. One was that the licensee desired to base the royalty payments upon the actual use of radio circuits in its business from time to time, and to spread the payments over a period of years. Another was that the licensee was going to make use of a very important patent, not having application at the time to the business of any other licensee, the use of which was expected to contribute to a substantial reduction of the licensee's operating costs. Again the royalty arrangement was that which both parties considered best suited to the particular business situation.

Under the theories that the Solicitor General would have this Court accept, such a carefully worked out licensing system, adjusted to the needs of the several businesses involved and providing royalties on the basis that is fairest in each particular type of case, would be impossible. For such a system of licensing must rest upon the availability to the licensor of legal remedies which enable him to confine each licensee to the field in which he has chosen to take a license. In a practical world, that requires a remedy against a third party who induces the infringement, as well as

against the licensee, because (a) where licensees are numerous the third party infringer, if commercially strong, can harass the patentee by corrupting one after another of the licensed companies, and (b) there are many cases in which only the third party infringer, who is deriving commercial revenues from the use of the patents, could respond adequately in damages; and, of course, if the third party were not amenable to the injunctive process, he could go on procuring infringements of the patents at will.

The Solicitor General's arguments overlook the importance of limited licenses in the business world and their usefulness in promoting the wide use of patents. Many inventions have a number of potential uses, sometimes in widely different fields. A business concern developing or acquiring such an invention may be able to employ its patent for only one of the potential uses. It may not have the skill or capital to go into other lines of business, or for some other reason it may not want to do so. In such a situation it is in the public interest that the patent should be put to use in other fields by the granting of licenses to companies operating in those fields. Unless, however, licenses to manufacture for particular uses are effective, a patentee in that situation can enjoy the benefits of its patent monopoly in its own business only by refusing to grant licenses in other fields. A rule requiring that result would hinder industrial progress and be contrary to the public interest.

The Solicitor General's broad attack on limited manufacturing licenses would, if successful, overrule an unbroken line of decisions of this Court extending back at least 90 years. *Rubber Company* v. *Goodyear*, 9 Wall. 788, 799-800; *Mitchell* v. *Hawley*, 16 Wall. 544. Mr. Justice Brandeis was able to say, in 1938, that

> "The practice of granting licenses for a restricted use is an old one, * * *. So far as appears, its legality has never been questioned." (*General Talking Pictures Co.* v. *Electric Co.*, 305 U. S. 124, 127.)

The *General Talking Pictures* case was decided after full consideration, first upon the original argument and then on a re-argument. The opinions of Justices Butler and Brandeis are closely reasoned and persuasive, and the dissent of Mr. Justice Black was less a difference on patent law principles than on the factual question of whether the patented apparatus involved in the case did in fact move, and was generally available, in the ordinary channels of trade.

A great deal of business has been done, and many arrangements under patents have been made, on the authority of those decisions. They ought not to be disturbed except for strong and cogent reasons. Moreover, the present case is not one in which an intelligent re-examination of the *General Talking Pictures* case could be made, because it does not involve a real controversy between the parties as to the lawful scope or the legal or practical effect of limited licenses or license notices.

POINT II

THE SOLICITOR GENERAL'S CONTENTION THAT THE MEASUREMENT OF ROYALTIES ON A BASIS OTHER THAN THE ACTUAL USE OF THE LICENSED PATENTS CONSTITUTES A TOLL ON COMMERCE BEYOND THE SCOPE OF PATENTS SHOULD BE REJECTED.

Here again the Solicitor General is asking the Court to decide an abstract proposition, and not one that is the

subject of a real controversy between the parties. As we understand the facts, petitioner has been manufacturing and selling radio receiving sets embodying certain of the respondent's patents, was sued for infringing those patents and settled the suit by taking a license in the respondent's usual form. Therefore, while under the license agreement the petitioner might have to pay royalties on apparatus that did not employ any of respondent's patents, that is not the case before the Court.

But if the question were before the Court, the contention of the Solicitor General still ought not to prevail, because the suggested rule of thumb is not an intelligent one. It would stamp the brand of illegality on many natural and sensible business arrangements having no possibly adverse effect on the public interest.

The Solicitor General appears to assume that there is a right way, and only one right way, to compute patent royalties. But the statute which grants a legal monopoly to the patentee does not fix or restrict the amount or character of the consideration that he may receive for relinquishing his monopoly privilege or sharing it with others. The fundamental principle of freedom of contract applies to patentees as to other property owners; and so long as the patentee's contracts do not bring about results that are contrary to the public interest, there is no reason for the courts to concern themselves with the consideration that is to be paid to him or the methods employed in computing it.

We can readily conceive of royalty arrangements being held unlawful where they involve the measurement of royalties upon sales of unpatented as well as patented products. For example, if the purpose and effect of such a royalty charge were to increase the price of unpatented goods and render them non-competitive with patented goods, trade

would be unlawfully restrained. See *United States* v. *U. S. Gypsum Company*, 333 U. S. 364, 397. But the vice would lie in the purpose and effect, and not in the mere fact that the consideration for the patent license was measured by some standard other than the revenues derived from sales of the patented article.

There is an easy plausibility in the Solicitor General's proposition that a patentee may not take toll of an industry when his patents are not being used, because he may not derive royalties from unpatented goods. The word "royalty" has connotations of a tribute exacted for a privilege, and it is plausible to urge that tribute may not be exacted when the privilege is not exercised. But the concept of "royalty" as a tribute is not inherent in the patent law; and if the word "compensation" or "consideration" be substituted, and account be taken of the consideration that moves from the patentee to the licensee in actual business situations, the unsoundness of the Solicitor General's rule of thumb becomes apparent.

The end purpose of all royalty arrangements is to fix a fair consideration for the benefits that the licensee derives or expects to derive from the license; and the royalties of patentees are frequently measured on a basis other than the use made of particular patents because often, under modern business conditions, the rights and benefits accruing to the licensee often go beyond the patent or patents. Professor Armstrong's FM development is an example. It was the end result of about 20 years of research and experimentation having as its objective the elimination of static in radio. When Armstrong in the middle 1920's turned to what he called frequency modulation as a possible means of solving radio's most vexing problem, he had first to invent a transmitter that would produce a wave with the physical charac-

teristics that he wanted, since at the time no one knew how to do that. He also had to invent a receiver that would function with such a transmitter. But when after years of continuous work he had accomplished those purposes, his objective was still unattained; and three more years of research and experimentation were necessary before the great inventive conception of "FM" came along. Nor did the inventive process stop there. During four more years of research and of practical work in putting his inventions into use, two more inventions of a major character were made, as well as a number of improvement inventions.

When the time came to license radio receiver manufacturers under the patents, what the prospective licensees wanted was not rights under this patent or that, or even under the patents that the inventor himself considered to be involved in the apparatus to be manufactured. They wanted a blanket license under any and all radio patents of the inventor, then issued or which might issue at any future time during the term of the agreement, together with a unilateral privilege of extending the license for further periods of time so long as useful patents remained in the licensor's hands. For those rights—and, during the early years, for the promise of the inventor to cooperate with and assist them in their FM development work—they were willing to pay a stipulated royalty, which would be the same in amount whether they used ten patents or one.

It is not unlikely that they would have been willing to agree to pay a royalty on all frequency modulation radio receivers sold by them, whether in any particular set they used ten patents or *none*. That question did not come up because one of the patents was considered to be so basic that it would be involved in all FM apparatus. But if the question had come up and the royalties had been measured

by sales of receivers without regard to the use of patents, the royalty agreement would have been based on good and lawful consideration in the grant to the licensee of the privilege of using the patents if he wished, and in the further grant of any and all future rights which the licensor might be in a position to confer. Trade would not have been restrained in any manner; and in the negotiations the royalty rate would have been fixed in the light of the royalty base, and probably it would have been lower; and total royalties might or might not have been greater than they actually were.

The question of fixing royalties independently of the use of particular patents has recently come up in a very practical way in Professor Armstrong's FM patent situation. Several years ago a public service communications company took a license under his FM patents and embarked on a program of building ultra-high frequency radio relay links throughout the United States. Some months ago, that company requested certain modifications of its license agreement, offering at the same time to make other modifications in favor of Armstrong, including a change in the method of computing royalties.

In the discussions which followed, the company suggested that payment of royalties be made independent of the use of the patents in particular apparatus and circuits; that the agreed royalty charges be paid for the privilege of using the patents if desired, and for the grant of rights under future patents. Its arguments in favor of that proposal may be paraphrased as follows:

Armstrong would be saved the trouble of determining whether one or more of patents were being used in particular apparatus and circuits of the licensee, and the licensee likewise would be spared that trouble. The licensee appreciated

the merits of Armstrong's inventions, recognized that he had opened the way for their going into the ultra-short wave radio field, valued his willingness to advise and help them and wanted to be able to take advantage of it during the development of their project. They wanted to avoid any differences of opinion with him as to the scope of his patents or their applicability to particular apparatus. They thought the apparatus that they were going to employ would fall into several classes—those admittedly involving one or more of the Armstrong patents, those which their patent attorneys thought the Armstrong patents probably did not cover, and those where the question was considered doubtful. Since the royalty rate was low, they thought it would be cheaper to pay the royalties on all their circuits rather than to require their patent lawyers to pass on each piece of apparatus so as to demonstrate to their accounting department whether or not it employed some Armstrong patent.

The difficulty of determining when a particular patent is being used must not be underestimated. In the mechanical arts, where the eye can observe, the problem is relatively simple; but that is not true of the modern fields of science where the phenomena are largely unseen. There have been cases where controversies have raged for years as to whether particular inventions were being employed in particular radio apparatus, where the issues were purely questions of fact as to the electrical phenomena that were occurring in the apparatus. Questions as to the scope of patents are frequently difficult also; and in the practical business world, if the patentee has contributed something of real value to the industry, and his ability to make additional contributions in the future is recognized, it is frequently the case that both the patentee and those who do business with him prefer to be rid of such questions.

In short, the proposal made by Armstrong's licensee, for royalties not definitely tied to the application of patents to particular apparatus, was a suggestion for a practical business arrangement between private parties, which appeared to be suited to their mutual interests and convenience, and if accepted could not possibly have affected the public interest adversely.

It would be possible to give many illustrations of the absurd and uneconomic results that would be produced by an academic formula or rule of thumb that required a patentee to tie his compensation directly and invariably to the use or sale of a piece of apparatus employing his patents. One good illustration, as we see it, is Professor Armstrong's method of licensing radio broadcast transmitters, according to which the man who puts up a 1 kilowatt station pays $250, the man who erects a 50 kilowatt station pays $2,500, and those whose stations have power of more than 1 kilowatt but less than 50 kilowatts pay according to an appropriate sliding scale; and when any licensed station increases its power it pays the additional amount that the higher power calls for.

Since the operating power determines the geographical area that the station can serve, and hence the advertising revenues that it can derive, it is a rough approximation of the value of the patentee's inventions to the user; and no one has yet been able to suggest a fairer method of computing royalties.

Nevertheless, according to the theory propounded by the Solicitor General in this case, it might well be held to be an illegal method. For when the operating power of a station is increased, it usually is not necessary to replace the transmitter, but only to add amplifying equipment to it; and

amplifying equipment by itself is not covered by Armstrong patents. It would be easy, therefore, to analyze the situation as one in which an additional royalty was being paid for the privilege of using unlicensed apparatus. Yet from the time when Armstrong granted his first license for a broadcast transmitter, not a single broadcaster has ever complained about that method of collecting royalties. On the contrary, everyone concerned has agreed that it is eminently fair and reasonable. It would be absurd—and it would not be in the public interest—to condemn such an arrangement on the basis of some academic theory of the proper method of computing royalties.

The illustrations that we have given show the fallacy of the Solicitor General's method of stating the question that he seeks to put before the Court, *i.e.*, in terms of an extension of the patent monopoly to unpatented apparatus. When Professor Armstrong collects a royalty from a radio broadcaster who has increased the power of his station, his patent monopoly is not being extended. His right to collect the royalty is derived from a private contract, and not from the patent monopoly. He does not thereby acquire the power to collect royalties on the use of amplifiers by others or to enjoin unlicensed companies from employing amplifiers. Nor is his monopoly increased when a radio communications company makes a royalty payment in respect of a circuit which at the moment is not employing his patents. He cannot sue any other company for royalties on the same basis or enjoin them from using unpatented apparatus; and in the actual illustration that we have given, the public service company would be making the payment; not in recognition of Armstrong's right to collect royalties on that apparatus but in express derogation of that right, and as part of the consideration for rights of a much broader character.

The adoption by this Court of the suggested rule of thumb, with respect to the computation of patent royalties, would not affect those business concerns which have control over segments of industry by virtue of their patents. Nor would it affect those in a position to operate in a large way, as by taking a stock interest in the licensee company, entitling them to enjoy the profits from unlicensed as well as licensed business, or by contracting to receive a percentage of gross revenues or net profits. It would only affect seriously the individual patentee or small patent holder, who must conform to the business situations in which he finds himself if he is to derive from his inventions the rewards that the patent law holds out to him.

POINT III

THE CONTENTION THAT THE PETITIONER SHOULD BE PERMITTED TO PROVE INVALIDITY OF THE PATENTS AS A DEFENSE TO THIS ACTION SHOULD BE REJECTED.

Petitioner's broad attack on the ancient doctrine of estoppel of a licensee to contest the validity of the licensed patents does not find support in the decisions of this Court in *Sola Electric Co.* v. *Jefferson Co.*, 317 U. S. 173; *Katzinger Co.* v. *Chicago Mfg. Co.*, 329 U. S. 394; *MacGregor* v. *Westinghouse Co.*, 329 U. S. 402; and *United States* v. *U. S. Gypsum Co.*, 333 U. S. 364, 387-88. Nor does the Solicitor General join in that attack.

Hence we address ourselves to the narrower argument of the Solicitor General, who advances the general proposition "that the validity of the licensed patents may be challenged in any case where the contract would be illegal in the absence of valid patents" (p. 5), and finds that proposition

applicable here because, he says, "the refusal of respondent to permit all the licensees in petitioner's position to sell to purchasers who might use the product commercially, and the attempted restriction upon the purchasers themselves, would unquestionably constitute an unlawful restraint of competition apart from the protection afforded by the patent laws" (p. 4).

Thus the Solicitor General's argument raises two questions:

> (1) Is a license to manufacture and sell for particular uses unlawful if not based upon valid patents?
>
> (2) Does such a license become unlawful if the licensee is required to affix to the apparatus a notice of the limited use for which the manufacturer is licensed to sell?

We do not know of any authority for the proposition that such a limited use license depends for its lawfulness upon the validity of the patents, where the licensor in good faith grants a portion of what he considers to be his rights and does not exact from the licensee an agreement to refrain from doing business in the unlicensed fields. *Cf. Nachman Spring-Filled Corporation* v. *Kay Mfg. Co.*, 139 F. (2d) 781.

Though the invalidation of a patent may make a license agreement ineffective from that time on, on the theory of "eviction" (see *Crackett Chemical Co.* v. *Chamberlain Co.*, 63 F. (2d) 853, 855, but *cf. Appleton Toy & Furniture Co.* v. *Lehman Co.*, 105 F. (2d) 801, 803), the invalidation of patents has never been held, so far as we know, to invalidate a license agreement under those patents—much less to make such an agreement "an" unlawful restraint of competition". On the contrary, such patent licenses are held

to be effective up to the time of the eviction and to require the payment of royalties up to that time. *Appleton Toy & Furniture Co.* v. *Lehman Co.*, *supra*, at 803.

Adoption by this Court of the doctrine suggested by the Solicitor General, that a limited patent license agreement is unlawful unless supported by valid patents, would have a shattering effect upon many licensing arrangements now in existence. It would cast doubt on the doctrine that royalties do not become repayable in the event of the invalidation of the patents. It would raise questions of treble damages under the anti-trust laws. It would unquestionably lead to a multiplicity of litigation by licensees who might seek an opportunity to escape the payment of royalties, or to make favorable settlements of claims for royalties against them, by refusing to pay and then pleading invalidity when sued.

Such a rule would promote litigation, discourage the settlement of litigation and make the lot of independent inventors more difficult than it already is—especially because the validity of a patent is not the easiest of problems. Validity is not an absolute truth, capable of certain determination in every case. Patents have been held invalid because witnesses have died and dates could not be established, or because for some fortuitous reason the patentee could not sustain his burden of proof, or because of the application of some new and technical principle affecting the requirements of claims. The Justices of this Court have had differences of opinion among themselves as to whether particular patents were valid or invalid; and it could hardly be asserted that every case where a patent was invalidated was correctly decided.

We venture to mention a number of conspicuous cases wherein the courts have held invalid, for want of invention or for anticipation, patents which have been held in the

highest esteem in the scientific world. The most fundamental of all patents in radio, the Marconi 4-circuit tuning patent—the invention with which practical wireless communication began—was held invalid for want of invention. *Marconi Wireless Co.* v. *United States*, 320 U. S. 1. The patent for one of the commercially most important inventions of the last 50 years, the Langmuir high-vacuum patent for electronic tubes, was invalidated on the same ground. *De Forest Radio Co.* v. *General Electric Co.*, 283 U. S. 664, opinion amended, 284 U. S. 571. But the decisions of the courts in those cases have not been accepted in the world of science, and credit for the inventions still belongs to the patentees.

Scientific history still records that Marconi gave birth to radio communication when he made the 4-circuit tuning invention, and it remains one of the great inventions of history. And in 1940 six of the most distinguished scientists in the country, in connection with the 150th anniversary of the patent system, selected Dr. Langmuir as one of the 19 living Americans whose inventive contributions to American life had been of a major character, and specifically cited him as the creator of the high-vacuum tube.*

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*The selection was made and the citation written by the Committee on National Modern Pioneer Awards, composed of Karl Compton, Chairman; John Tate, Dean of the College of Science, University of Minnesota, and President of American Physical Society; Forest R. Moulton, Permanent Secretary, American Association for the Advancement of Science, formerly Professor of Astronomy, University of Chicago; Edward R. Weidlein, Director of the Mellon Institute and past President of the American Association of Chemical Engineers; George B. Pegram, Dean of the Graduate Faculties of Columbia University, and past President of the Society for the Promotion of Engineering Education; and Frank C. Whitmore, Dean of the School of Chemistry and Physics, Pennsylvania State College, and past President of the American Chemical Society.

In *Radio Corporation* v. *Radio Engineering Laboratories, Inc.*, 293 U. S. 1, Dr. Lee DeForest, rather than Dr. Armstrong, was held to have been the inventor of the regenerative circuit, the foundation of radio as we know it today. The highest scientific body in radio, the Institute of Radio Engineers, had previously awarded its Institute Medal to Professor Armstrong for his achievement in making that invention. At the time of this Court's decision, exactly one-half the directors of the Institute were either employed by, or employed by affiliates of, American Telephone & Telegraph Company or Radio Corporation of America—the two corporations that had been successful in defeating the Armstrong patent. Nevertheless, the Institute directors, shortly after this Court's decision, unanimously re-awarded the medal to Armstrong, reaffirming the original citation which credited him as the true inventor. The Franklin Institute followed suit, with the award of the Franklin Medal, and the American Institute of Electrical Engineers with the award of the Edison Medal. So also did the Committee on National Modern Pioneer Awards who in 1940, in selecting both Armstrong and DeForest as among the 19 living Americans whose inventive contributions to American life had been of the highest order, specifically cited Armstrong and refrained from citing DeForest as the inventor of the regenerative circuit.

We cite these cases, not in criticism of the courts, but as illustrations of the difficulties and uncertainties that are often involved in determining the validity of patents, and the practical unwisdom of rules that would prevent patentees and alleged infringers from resolving those uncertainties and difficulties by reasonable and legally effective business arrangeme ts, that permit new ideas and new

devices to be put into use and inventors to go on inventing, instead of spending their time litigating.

The second question which the Solicitor General raises is whether it is necessary to establish a valid patent in order to make it lawful for a licensor to specify that a limited use notice be affixed to the apparatus.

We do not know of any authority that would support the Solicitor General's position. Of course, if the patents are invalid, the notice has no legal effect whatever, since it cannot be enforced; and there is serious doubt as to what legal effect, if any, such a notice has where the patents are admittedly valid, beyond the limited situation represented by the *General Talking Pictures* case, where it conceivably might serve to prove actual knowledge on the part of one who had induced a licensee to do business in a field where it had not taken a license. In his dissenting opinion in the *General Talking Pictures* case Mr. Justice Black did not suggest that the license notice there was unlawful, but only that as a matter of law of property it should not be given effect.

The Solicitor General argues that the notice would have a practical effect, when taken together with threats of infringement suits. But there is nothing in the record, so far as we know, to indicate either that such threats were made or that there was anybody in a position to be threatened.

The matter of the notice is a good example of why courts do not decide questions that are not presented by real controversies before them. Leaving out of account the fact that petitioner never actually put the notice on its sets, to hold that such a notice might have the suggested practical effect would be pure speculation. We have never heard

of a case in the radio industry where a member of the public was sued or threatened with suit for infringement for an unlicensed use of a home receiver.

Moreover, we doubt that there is any other industry in which, by custom, license notices (whether restricted or of the conventional type) have become of less importance than in the radio industry, where the manufacturers have shown great resourcefulness in placing such notices—when they are affixed at all—where the purchaser of the radio set will never see them unless he is looking for them, and then only if he takes the set apart.

We respectfully suggest, to any member of the Court who may be interested, that he examine any radio set in his home in order to determine (a) whether he can find any of the several license notices that are supposed to be affixed to such apparatus, and (b) whether—if he finds one—he can get near enough to it, and get enough light on it, to read the fine print, even with the aid of a flashlight and a magnifying glass.

We submit that the issue of the restricted license notice in this case is *de minimis* as well as fictitious.

The position of the Solicitor General is not supported by this Court's decision in the *Sola Electric Co.* case and the other cases above cited, or by the decision of the Court of Appeals for the Second Circuit in *Nachman Spring-Filled Corporation* v. *Kay Mfg. Co., supra.* While the *Sola Electric Co.* decision was, as Judge Frank remarked in the *Nachman* case (at p. 783), a surprise to the bar, the reasoning of that case and of the subsequent cases is crystal clear. It was this:

A license agreement providing for the fixing of prices of patented articles is lawful. An agreement to fix prices

of articles not covered by valid patents is unlawful under the Sherman Act. Assuming that a price-fixing patentee holds only invalid patents, and his licensee is not permitted to contest them, then the doctrine of estoppel has the effect of legalizing and perpetuating a violation of the Sherman Act. The public interest in competition precludes that result.

The *Nachuaii* case applied the same principle to an agreement not to compete—a specific restraint of trade that would be perpetuated, and in effect made lawful, if the party restrained were not allowed to escape from the restraint on account of the invalidity of the patent.

But the application of the rule of estoppel in this case would not have any such effect. Insofar as the license notice is directed at the manufacturer, it does nothing more than restate the scope of his license. Insofar as it is directed at the hypothetical purchaser of radio sets who wants to employ them for commercial purposes, it is not self-enforcing; and if any such person exists and should be sued for infringement, he would be fully entitled to set up the invalidity of the patents, the invalidity of the notice, the rule of property law invoked by Mr. Justice Black in the *General Talking Pictures* case and any and every other relevant defense.

The Sherman Act is couched in terms as broad as those of the Constitution itself. The application of its general principles to practical cases has been a matter of gradual evolution over a period of 60 years, during which a body of doctrine—some of it precise and some of it as broad as the statute itself—has been evolved. The legality or illegality of particular business practices under the Sherman Act is not always clear in advance of judicial decision; and

sometimes it is not entirely clear after judicial decisions which are not unanimous. A rule, therefore, that deprived a patentee of the benefit of the estoppel doctrine merely because some restraint or attempted restraint of trade, however trivial, could be found in his license agreements, would be very harsh indeed.

The doctrine of estoppel to contest the validity of licensed patents is a very important protection for patentees—second only to the infringement remedy itself. That doctrine makes it possible for patentees to develop their inventions and arrange in an orderly manner for them to be put to use, with the confidence that an infringer will have to be dealt with only once. There is hardly any type of litigation more expensive than infringement suits, especially where the patents are technically difficult and relate to matters beyond the ready comprehension of laymen. The books are full of examples of the resourcefulness of licensees in evading and avoiding royalties; and if every contest over royalties, most of which must be brought to suit in the State courts, could be turned at the will of the defendant into the equivalent of a long and complicated infringement suit—but without the danger of treble damages that an infringement suit in the Federal courts involves—the exploitation of patent rights would be difficult indeed, at least for the individual patentee and the small patent-holding company.

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Respectfully submitted,

ALFRED MCCORMACK,
Attorney for Edwin H. Armstrong as Amicus Curiae.

WALTON H. HAMILTON,
Of Counsel.